CLAIMS

What Is Claimed Is:

1. For use in an implantable medical device, a biocompatible, biostable, corrosion-resistant wire strand comprising:

a core comprising a plurality of electrically conductive, low electrical resistance filaments embedded in an electrically conductive matrix; and

a low electrical resistance, substantially chemically inactive cladding.

2. The wire strand of claim 1 in which:
the core is substantially devoid of interstices.

3. The wire strand of claim 2 in which:
the core comprises a drawn filled tube (DFT).

4. The wire strand of claim 2 in which:
the core comprises a drawn brazed strand (DBS).

5. The wire strand of claim 1 in which:
the plurality of filaments comprise a material selected from the group consisting of silver, gold and a low electrical resistance conductive polymer.

6. The wire strand of claim 1 in which:
the matrix comprises a material selected from the group consisting of MP35N, tantalum, titanium and niobium.

7. The wire strand of claim 1 in which:
the plurality of filaments comprise silver; and
the matrix comprises MP35N.

8. The wire strand of claim 7 in which:
the core comprises a 1xN strand, where N = at least 2.

9. The wire strand of claim 8 in which:
N = 19.

10. The wire strand of claim 7 in which:
the plurality of filaments comprise 10-35% by weight of the core.

11. The wire strand of claim 1 in which:
the cladding comprises a material selected from the group consisting of platinum, iridium, rhodium, palladium and alloys thereof, including a platinum/iridium alloy.

12. The wire strand of claim 1 in which:
the filaments are braided.

13. An implantable cardiac lead for transmitting electrical signals between an implantable medical device and selected body tissue in the heart, the lead comprising:
a lead body having a proximal end and a distal end, the proximal end of the lead body carrying a connector assembly connectable to the implantable medical device; and
at least one electrode on the distal end of the lead body, the at least one electrode being electrically connected to a terminal contact on the connector assembly, the at least one electrode comprising a biocompatible, biostable, corrosion-resistant wire strand comprising (a) a

core comprising a plurality of electrically conductive, low electrical resistance filaments embedded in an electrically conductive matrix and (b) a low electrical resistance, substantially chemically inactive cladding enclosing the core.

14. The lead of claim 13 in which:

the at least one electrode comprises at least one cardioverting and/or defibrillating electrode.

15. The lead of claim 13 in which:

the at least one electrode comprises at least one pacing and/or sensing electrode.

16. The lead of claim 13 in which:

the wire strand is in the form of a coil.

17. The lead of claim 13 in which:

the core of the wire strand is substantially devoid of interstices.

18. A wire strand comprising:

a cladding layer comprising a material selected from the group consisting of platinum, a platinum/iridium alloy, iridium, rhodium and palladium; and

a drawn filled tube core comprising a plurality of filaments embedded in a matrix, each of the plurality of filaments comprising a material selected from the group consisting of silver, gold and a low electrical resistance conductive polymer, and the matrix comprising a material selected form the group consisting of MP35N, tantalum, titanium and niobium.